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### LIV.—Botanical Excursion in Lower Styria in 1842. By R. C. ALEXANDER, M.D.\*

In the spring of 1842 I was persuaded by my friend Dr. Maly to take a tour through Lower Styria, as a country that had been hitherto very little explored by botanists, though from its situation seeming to claim their especial notice. Situated in a degree of latitude about the same as that of the middle of France, at the base of the great central Alpine group of Europe, three branches of which terminate in this province; and on the other, the eastern side, exposed to the influence of the great plain of Hungary, where the winter is as cold as in the steppes of Russia, and the summer as hot as in the warmest parts of Italy or Spain, it might be expected to evince in its vegetation the effects of a climate so modified. Though it was impossible in an excursion of eight weeks to obtain anything approaching to a perfect knowledge of its flora, the few plants collected are of interest in connexion with the circumstances under which they present themselves.

During the first four months of the year I remained at Gratz. The thaw set in on the 2nd of March, but the weather continued very cold till the end of April, and the vegetation was unusually backward. During this time I collected Daphne Mezereon, which was in blossom on the 14th March upon the Schöckel, a month earlier than in the plain below, Crocus vernus, and its var. albiflorus, Helleborus viridis, Carex clandestina, ornithopoda, digitata, montana and pracox; Erythronium Dens-canis, which is abundant in all the woods from Gratz southward, Anemone pratensis, Halleri, hepatica, ranunculoides, Hierochloa australis, Sesleria cærulea, Petasites albus, Potentilla cinerea and alba, Erica carnea, Gagea lutea, Isopyrum thalictroides, Corydalis solida, Cornus Inas, Potentilla micrantha, Ram., Primula Auricula, Valeriana tripteris, Gentiana acaulis and verna, Viola arenaria, Pulmonaria mollis and officinalis, Daphne Cneorum, Mercurialis ovata, and Veronica triphyllos.

The Society will find specimens of them with their habitats among the plants sent. The Anemone Halleri is the same as the Bohemian Hacquetii, and the plant of Piedmont described by

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Allioni, specimens of which from its station there are in Mr. Rainer's herbarium in Gratz. The Vienna An. Pulsatilla is not very different. Indeed botanists are inclined to consider it a transition form. The flower is nodding, like Pulsatilla, and the leaves are those of the A. Halleri, to which I have myself no doubt that it properly belongs. The Potentilla cinerea is another questionable plant. Many maintain that there is no difference between it, the *P. opaca* and *P. verna*, more than arises from situation. The *cinerea* inclosed with this was gathered in a wood on a limestone soil, where the forest was burnt some years ago, and consisting chiefly of charcoal and ashes. It was with the A. Halleri. Foreign botanists who see only the extreme forms may find it very easy to distinguish these Potentillas and Anemones, when collected in their herbaria from distant countries. Here on the spot where they grow I find that I cannot. The Primula veris, L., appears here as a pure P. officinalis, elatior, and acaulis, but between them are transition forms, elatior with radical peduncles all round the scape, and on sloping meadows the officinalis is seen to pass gradually into the elatior in descending from above to the moister ground below. Trattinick was quite in the right to make one species of it in reference to the Austrian flora.

The Potentilla sent as micrantha is the breviscapa, Vest. The P. Fragariastrum with caudiculi repentes is not found here; but this form, the *micrantha*, far from being confined to the Donati, grows on several hills near Gratz, and becoming more abundant towards the south, is found in all the woods on the north side of the hills in Lower Styria, and I have seen specimens of it in herbaria from Agram, and from the Banat in Hungary, sent as the Fragariastrum. It appears to me that there is in all genera in these countries less tendency to spread by caudiculi than in England. Bohemian botanists, Tausch and Co., who live in a country where there is very little variety of climate and situation, seem incapable of conceiving the versatility of plants in accommodating themselves to circumstances. A more remarkable instance of this quality is seen in the Moehringia, which on hot dry limestone rocks is M. Ponæ, and in the crevices and under the shadow of bushes M. muscosa. In ravines which are constantly damp and shady I have remarked the same transition of M. trinervia into M. heterophylla. A very careful and excellent botanist, Mr. Zehentner, has collected transition forms with as much care as others throw them away, and among Arenarias, Campanulas, Primulas and other genera, shown that a great number of so-called species are only varieties.

On the 2nd of May I set out on my journey through Lower Styria. The unceasing wet weather during the whole of this month rendered it much less agreeable and remunerating than, from the richness of the flora and the hospitality I met with everywhere, it would otherwise have been. Many plants turned mouldy from the impossibility of drying my paper in the sun. There was only one fine day from the 3rd to the end of the month.

At Marburg I found Lamium Orvala and Anemone trifolia, which comes with the Drave from Carinthia, and is abundant on its banks and the hills near it, but appears nowhere else I believe in Styria. At Wurmberg I collected several with blue flowers, but the colour is nearly lost in drying. The forests on the Bacher were just beginning to revive from the unusually long This mountain forms a marked boundary in the vegewinter. It is about 5000 feet high, twenty English miles long, tation. and five or six broad, and covered with forests left from time immemorial to a state of nature, and only inhabited by wolves and other wild beasts. On the first view of the country to the south of it, the greater number and beauty of many trees, which to the north of it occur as isolated individuals, and the scarcity of others, such as the Conifera and birches, which form the forests of Upper Styria, make an impression on the traveller that he has entered a different climate. The aspect of Lower Styria has nothing of the savage dismal character of the northern part of the province, but its magnificent streams the Save and Drave amply compensate for the precipices and waterfalls; and one who can feel the beauty of a quiet and unobtrusive majestic scenery without requiring the harsher features of a landscape to awaken their attention, will feel as deep and lasting an interest in the valley of the Save, and at Wisell, Wurmberg, Cilli and other spots in that district, as in the Alps.

From Marburg I went to Stattenberg, a castle at the foot of the Wotsch, ten English miles west of Pettau, and remained there a fortnight with Mr. Peterstein, a botanist well acquainted with the localities. Among many other plants which being common about Gratz I did not collect, were Scrophularia vernalis, Lapsana fætida, abundant in every wood, Potentilla micrantha, Veronica acinifolia, Lunaria rediviva, Arabis turrita, Dentaria enneaphyllos, bulbifera, and the rare trifolia, Glecoma hirsuta, Scopolina atropoides, Loranthus europæus, Astrantia Epipactis, and Aremonia agrimonioides, a plant that had been singularly overlooked, though very abundant in shady moist woods in all parts of Lower Styria south of the Bacher. These on the north side of the Wotsch, in warm dry situations : Aronia rotundifolia, Helianthemum alandicum foliis incanis, Cytisus prostratus, Scop.? Thlaspi montanum. Orchis pallens and sambucina, usually in the woods, Genista scariosa, Viv. (triquetra, W. K.), Homogyne sylvestris, Carpinus

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Ostrya, Ophrys aranifera; and in narrow dells in the mountain, Cardamine trifolia, Chrysosplenium alternifolium, Carex pilosa and pendula, Corydalis cava, Cineraria longifolia and Arum maculatum, the latter not being found in Upper Styria.

From Stattenberg I went to Pettau and stayed a week there, visiting Ankenstein, Wurmberg and Dornau castles, to which I The town stands on a large plain of alluvial had introductions. soil and in summer is very much hotter than Gratz, being open towards Hungary, and the flora essentially different; I found Ornithogalum umbellatum in the corn-fields very abundant, often one foot and a half high; on dry meadows Saxifraga bulbifera and Ophrys aranifera, usually together in countless number. Most of the specimens were however spoilt by the wet and the impossibility of getting dry paper enough. Poa bulbosa var. vivipara, Orchis militaris, globosa and variegata; in damper situations Scrophularia Scopolii, Vicia grandiflora, Acorus Calamus, Menyanthes trifoliata. On the heath Galanthus nivalis in fruit, Vicia lathyroides, Arenaria rubra, Ajugu genevensis, Poa compressa.

Wurmberg and Ankenstein lie on hills a few miles from the town in opposite directions, but the plants being nearly the same I take them together, omitting what I also found on the Wotsch. Moenchia mantica, Koch, Campanula sibirica, and Silene rubella, Wulfen, all now discovered for the first time in Styria: that is, nobody had announced their discovery before, and in these matters "Paulum sepultæ distat inertiæ celata virtus." The Moenchia I have since found in a friend's herbarium unnamed, and the Silene is probably that given in Dr. Maly's book as Silene inaperta on Dr. Hayne's authority. Koch, on receiving a specimen from me, wrote in answer, "Diess ist die lang gesuchte Silene rubella, Wulf." I found it again at Wisell, and a gentleman at Töplitz in Croatia has lately sent it as S. linicola to Dr. Haffner. The Campanula sibirica, as well as Cytisus prostratus, Scop., and Helianthemum canum, I have not seen in any other herbarium, as found in Styria. Other plants were, Euphorbia dulcis, of the form ambigua, W. Kit., epithymoides and verrucosa, Potentilla rupestris, alba, Allium ursinum, for the first and last time in Styria; Ophioglossum vulgatum, another plant that had been overlooked, though as common in Lower Styria as in England; Asperula arvensis, Iris graminea, Carex Davalliana, common in wet meadows, Staphylea pinnata, Fraxinus Ornus, Orobus Clusii, Lithospermum purp. carul., Convallaria majalis, multiflora, polygonatum, Maianthemum bifolium, and on the castle hill at Pettau, Muscari racemosum. Had not the Lady Verwalterin of the castle at Wurmberg taken upon herself the charge of drying my plants, I could not have rescued half of

them. Leaving about 300 specimens with her, I pursued my excursions, and unfortunately for the Society, the lady acquitted herself so well of the task, that there are very few of those plants left me to send, the rest adorning the herbaria of other friends. Throughout the journey I was indebted to the kindness of Dr. Maly, to whom I directed the half-dried plants, and who laid them immediately into fresh paper and pressed them; notwithstanding which, many Orchises and other monocotyledons which it had been necessary to dip into boiling water were spoilt.

Proceeding from Pettau round the western side of the Wotsch to Rohitsch, I found Daphne Cneorum, Globularia vulgaris and cordifolia, Leontodon incanus, Carex alba and Michelii, Muscari comosum, and Helleborus niger in fruit. These were at the foot of the mountain on the south-west side. At the top as well as on most other Lower Styrian hills was Ostrya vulgaris.

At Windisch Landsberg, my next station, I found Lepidium Draba and the beautiful Orchis speciosa, Host. Whether this is a good species I will not undertake to say. The mascula appears here only on mountain meadows in May and June, and not as in England in woods in April, and is still more unlike the speciosa than the English one is. This plant I found in a clay bank under the castle and only one specimen of it, for the first time in this province. I could not at the time it was fresh find any specimen of mascula to compare it with. On the Rudenza, at the base of which the castle stands, I saw nothing new to me except Helleborus atrorubens in fruit. The Aremonia was very abundant, as well as Euphorbia dulcis. On the Croat side of the frontier my only prizes were Euphorbia virgata and Lathyrus Nissolia and Aphaca.

From Windisch Landsberg, where I staid three days and was most kindly entertained, but where there was less for the botanist than anywhere on my whole journey, I went to Wisell. On crossing a range of limestone hills to this castle the whole scene is changed. Plants that I had seen here and there as solitary stragglers were in abundance, and a multitude of new ones beside. On the other hand, many old friends disappeared. Coniferæ cannot be made to grow there. M. Hirschhofer, the proprietor, has made many attempts to rear them, but they die away in two or three years. In their place are oaks, but of what species I do not know, as they were eaten up with caterpillars. and did not present a green leaf except of the parasite Loranthus, which was abundant enough; chestnuts, Pyrus torminalis, Aria, Amelanchier, communis and Malus, Staphylea pinnata, Fraxinus Ornus, Ostrya and beech. Cratagus monogyna in the woods about Pischätz assumes almost the character of the weeping willow, and is one of the greatest ornaments of the forest.

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Maples, especially a form of Acer campestre with blood-red twigs and Samaræ, and the delicate Spiræa ulmifolia, which I was also the first to discover in Styria. Among herbaceous plants, Veronica austriaca v. multifida, Centaurea axillaris, Moehringia Ponæ and muscosa, Clematis erecta, Orchis fusca, Vicia tenuifolia, Roth., Lactuca perennis, Epipogium aphyllum, Corallorrhiza innata, and many already mentioned as occurring on the Wotsch and about Pettau. A mere catalogue gives a very inadequate idea of the vegetation: it was the proportion in which these plants occurred that struck me at every step. Genista scariosa covering large banks, Helleborus attorubens so thick that one could not walk free of it in the woods; Inula hirta, Hypochæris maculata, and other plants that occur about Gratz only locally, were here frequent and abundant; different birds and insects; altogether it appeared not so much a part of Styria as an outlier of a more southern district. One might perhaps say more correctly that it is not, like Upper Styria, hindered by the vieinity of high mountains from developing the climate proper to its degree of latitude. During my visit the ladies accompanied me over the frontier to Klanyecz, where I spent the day and a night in a Franciscan monastery, and made an excursion with one of the good monks up the Kaiserberg, but found the same things as at Wisell: Cynosurus echinatus, Scandix Pecten, Lathyrus Nissolia and Aphaca in the corn-fields; Physalis Alkekengi and Aristolochia Clematitis in most of the vineyards. My visit at Wisell was at the end of May, just as the weather began at last to clear up; and what with the beautiful scenery, delightful family, rich flora, and different dress and look of the people, who are here pure Croats, I was amply recompensed for almost daily soakings that I had got hitherto on my excursions. The drawback in this district is the language. The peasantry speak nothing but that of the country, and a different dialect of it in every village. It is even difficult in some places to get a guide who understands German. On the other hand, a Slavonian guide is worth two German ones for hunting out plants and digging them up. They have the character of being sly and tricky, but I suspect the fault lies oftener with the rascally Beamten, the employés of absentee noblemen, using the name of their master to oppress and cheat them. The gentlemen who reside on their estates universally spoke handsomely of them, and as far as I have had the opportunity of judging, they are naturally a much more intelligent people and more capable of attachment than the Upper Styrians. It may seem out of place to speak of the people here, but botanists may be deterred from visiting the most interesting part of the Austrian dominions by the ridiculous prejudices that are entertained against all kinds of Windisch, Croats,

Carniolans, Lower Styrians, Dalmatians or Slovacks. 'Sauvolk,' 'mistrauisch,' 'Spitzbuben,' are the terms commonly applied to them. They are charged with every kind of sensuality. The country gentlemen and the clergy speak better of them than those of Upper Styria do of their neighbours, and I recommend any of the Society who take a botanical trip into the Austrian dominions to visit one of these long-neglected provinces. Carniola would perhaps be the most interesting.

To resume the journey—I went next to Rann, which, like Pettau and Gratz, lies on a flat tract of alluvial land. This plain being just at the mouth of the gorge through which the Save discharges itself, is subject to dreadful devastations by floods, and a great part lies uncultivated, being too insecure. Here I found Scrophularia canina, Ajuga Chamapitys, and Leucojum astivum, and upon the neighbouring hills Epimedium alpinum, Hesperis matronalis, Orobus niger and Medicago carstiensis.

From Rann I made a short trip to Agram, and found on the road *Adonis æstivalis*, and on rubbish-heaps in the town *Pyrethrum macrophyllum*. The unceasing rain, alternating with intolerable heat, rendered all attempts at botanizing futile, and I returned to Rann, where M. Josepatz, a very zealous young botanist, had meanwhile dried my Wisell plants for me. Taking Reichenburg in my way to Lichtenwald, I found *Potentilla inclinata*, Vill., and *Orchis hircina*, with other plants seen at Wisell.

From Lichtenwald I ascended the Laisberg and found the long-lost Ranunculus Thora, L. (scutatus, W. K.), which, though abundant enough in Italian Tyrol, occurs nowhere else in the German provinces of Austria. Another hill near Cilli is called Leisberg: this one, on which the R. Thora grows, is printed Lisza on all the maps, though it really is pronounced and usually written Leis. There was a tradition that the plant grew on the Leisberg, and the Prefect Dorfman in Cilli had been tormented by all his friends to get them specimens, and had this year hunted for it high and low on the Leis. I brought down only ten specimens, not knowing that it was so prized. Other plants found were Orobus luteus, Laserpitium Siler, Ophrys myodes, Orchis mascula (on the 6th of June), Cytisus purpureus, and Linum viscosum and flavum. The outward habit of the O. mascula is very different, and so is the time of flowering, from that of the British plant, but it certainly agrees with Lindley's description of O. mascula. Gymnadenia conopsea and Platanthera bifolia usually accompany it on mountain meadows; and these too have a slenderer and more delicate form. Habenaria viridis grows in meadows as large and coarse as Orchis latifolia. Nearer the castle I found Ophrys arachnites and a very hirsute variety of Triticum (Brachypodium, Beau.) pinnatum. In the meadows, Gentiana utriculosa,

Omphalodes verna and Spiræa ulmifolia. Here, as almost everywhere in Lower Styria, the Struthiopteris germanica is abundant among the alders and underwood along the brooks. A very bad name is germanica for a plant that is only found in Bohemia and other Slavonian provinces. Clematis erecta and other plants that I have mentioned before occurred here in abundance: the same range of hills coming across from Klanyecz, Wisell and Reichenburg presents at Lichtenwald nearly the same flora. On the Carniolan side of the Save I found Saxifraga cuneifolia, Quercus Cerris, Veronica urticifolia, Silene gallica and Euonymus verrucosus.

From Lichtenwald I went to Montpreis. The first excursion was on the Wach Berg in a drenching rain and nothing found. Next day taking a different direction I met with *Lilium chalcedonicum*, *Coronilla montana*, *Viola mirabilis*, and a great number of other interesting plants already mentioned. Had Montpreis been the first station visited, I should have almost as much to say in its praise as about Wisell.

On the road thence to Cilli I found Ononis hircina and Asplenium septentrionale; but though travelling through a valley in the most shameful state of neglect that I have ever yet seen, the meadows covered with sedge and rush, I did not meet with any water-plants of the least interest. Carex ampullacea and C. hirta var. sublavis are not uncommon.

From Cilli, in company of the Prefect Dorfman, I made several most delightful excursions. On one down the beautiful and famous Sann Thal which I took alone and on foot, I found Lolium speciosum and Hemerocallis flava, both new to the flora, Rhus Cotinus, Dorycnium herbaceum, Erysimum strictum or E. odoratum; I do not know positively which it is; there is great dispute about it, and "adhuc sub judice lis est." Dianthus sylvestris, Biscutella lævigata and Aristolochia pallida.

With this excursion I took leave of the Save and its brilliant scenery. Through the whole length in which it forms the boundary of Styria to the south, it is confined by rocky shores covered nearly to the water's edge with forests of deciduous trees, broken here and there with villages of white houses. The profusion of white blossoms on the *Fraxinus Ornus* and *Spiræa Aruncus* and other trees and shrubs, and the beautiful clear green water, and above all, the custom in Lower Styria and Croatia of building their churches on eminences, give the Save valley an hilarity that I never saw equalled on any other river.

With regard to the *Erysimum*, I may say as I did of the Potentillas and Primulas, that there is no drawing an exact line between the different forms in the genus. *E. carniolicum*, *odoratum*, *strictum*, *repandum*, *crepidifolium* change their names with every

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herbarium one looks into. I have two specimens of carniolicum from Noé, named by Reichenbach, as stated on the label; and I have two others from Freyer, who is publishing the 'Flora Carniolica,' and ought certainly to know which is his country's plant; as forms they are as distinct as possible, Freyer's plants being the same identical variety as mine from Tüfer in the Sann Thal, and which has been given in Dr. Maly's 'Flora' by Mr. Zehentner as strictum. Of all my acquaintance I know no two men on whom I would rely with more confidence than these, Dr. Maly and Zehentner, and yet, as I said above, M. Freyer must know his own Carniolan plants. The fact is, that all five are one and the same species. Books are usually written by chamber botanists, who receive only the extreme forms, characteristic specimens, and hence arises this multiplicity of species.

In the Teufel's Graben near Cilli I found *Daphne Laureola*, a very scarce plant in these parts, and *Dentaria pinnata* in fruit. *Ruscus hypoglossum* grows there, but is so greedily seized by the peasantry to adorn the images in the churches that the botanist can seldom get a bit.

From Cilli 1 made an excursion with Prefect Dorfman to Schönstein and up the Eselberg, through the romantic Hudi Lukna, Devil's Ravine. We found Sedum hispanicum and dasyphyllum, Saxifraga crustata, Vest., Aizoon, rotundifolia, cuneifolia, Erysimum pallens most deliciously fragrant, Veronica saxatilis, Atragene alpina, Convallaria verticillata, and a new discovery for the flora, Cytisus alpinus.

I fear it may be out of place to describe how excursions go on in this part of the world when one has a good introduction, but it may induce some member to try a trip in the Windisch provinces of Austria. The Prefect is an elderly clergyman, educated at Admont, and a very well-informed man,-the very opposite of what some people figure to themselves of a Catholic priest from a convent,-liberal in his sentiments, a good Greek scholar and a botanist, one of the most delightful men I have met with. We started one afternoon and drove over to Schönstein castle, saw Stachys alpina and two or three other unimportant plants on the way, and took up our quarters at Mr. M . . . 's, a very good John-Bull-kind of country gentleman, not a man of science at all. He determined to accompany us next day, and sent to the village surgeon to be ready to go with us, and so we sallied out early in the morning and arrived at a parsonage on the mountain about The good clergyman, though taken by surprise, eleven o'clock. put a really superb dinner on table with the best of wine. No welcome in an Arabian desert could be more kind and cordial than he gave us. After dinner he accompanied us up to the top of the mountain, gave us a very interesting account of the country, and conducted us over the Carinthian frontier to St. Veith. There, by good luck, we met with another clergyman who invited us to sup with him on the way back, and treated us as handsomely as the gentleman with whom we dined; and so we reached Schönstein somewhere about two in the morning. One evil of the warm hospitality in the Slavonian provinces is, that the inns are neglected by respectable people and are consequently dirty and bad. To a person travelling through the country for the first time it is very pleasant, and he acquires a knowledge of people's feelings and mode of thinking better than in other countries at inns and coffee-houses; but what is gained by the traveller is lost by the botanist, and I often regretted, in the magnificent castles where I was staying, that I could not be out at five in the morning and return at seven in the evening, without waiting for breakfast or dinner with the family.

From Cilli I went to Gonowitz and thence ascended the Bacher, but found nothing of interest! *Pyrola uniflora, Doronicum austriacum*, which is pretty common, and plants that are here on all alps, *Veratrum album, Arnica montana, Cacalia alpina*, &c. A Tyrolese botanist ascended it in this month, November, and found *Botrychium matricarioides*, the first good plant that was ever brought from it. It has been explored by many botanists from all sides, but has been universally condemned as the most thankless mountain in all Styria, though from its great breadth and perfect wildness much might be expected from it. Mineralogists give it a better character.

Returning to Stattenberg I ascended the Donati, the most striking feature in Lower Styria from its abrupt precipitous face towards the north. Though not higher than the Wotsch it presents a great many alpine plants, none of which are found on the latter: Athamanta cretensis, Draba aizoides, Atragene, Primula Auricula, Hieracium flexuosum, W. Kit., Rosa alpina and Saxifraga Aizoon. Lower down were Prunella alba, Dianthus plumarius, Medicago carstiensis, Quercus Cerris and other things often seen elsewhere. The bathing-place, Ashitsch, has rendered the Donati so famous that I expected more from it. Possibly the visitors have extirpated some of the plants, to take home as keepsakes. Making another ascent up the Wotsch I found the vegetation quite changed, but nothing that I had not already collected elsewhere. On my way from Stattenberg to Marburg I saw Lathyrus tuberosus and Galega officinalis very abundant, and in an excursion from Marburg found Orobanche Picridis, with which the excursion closed; and I returned on the 28th of July to Gratz, having enriched the Flora Stiriaca with about fifteen new species, in addition to the 1900 it already contained.